MATERIAL SAFETY DATA SHEET

PRODUCT NAME: EPOXY CATALYST
PRODUCT CODE: C-31

HMIS CODES: H F R P
2* 3 0 G

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME: SIKKENS AEROSPACE
ADDRESS: 20846 SOUTH NORMANDIE AVENUE, TORRANCE, CA 90502
EMERGENCY PHONE: 213-320-6800 INFORMATION PHONE: 213-320-6800
DATE PREPARED : 07-22-87 NAME OF PREPARER : BRENT BERGMAN
REASON REVISED : ORIGINAL

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS ACHIH TLV	OSHA PELV	NIOSH PELV	VAPOR PRESSURE mm Hg @ TEMP		WEIGHT PERCENT
1-Piperazineethanamine	140318	NOT ESTAB.	NOT ESTAB.		0.1	68F	100

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 410 Deg F SPECIFIC GRAVITY (H2O=1): 1.0
VAPOR DENSITY: HEAVIER THAN AIR EVAPORATION RATE: SLOWER THAN ETHER
V.O.C.: N/A
SOLUBILITY IN WATER: SLIGHT
APPEARANCE AND ODOR: CLEAR LIQUID IRRITATING ODOR

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 205 Deg F METHOD USED: PEN-MARTIN
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.0% UPPER: N/A

EXTINGUISHING MEDIA: FOAM, CO2, DRY CHEMICAL

SPECIAL FIREFIGHTING PROCEDURES
Full emergency equipment with self contained breathing apparatus should be worn. During a fire irritating and highly toxic gases (see reactivity data) and smoke are present from decomposition and combustion products.

UNUSUAL FIRE AND EXPLOSION HAZARDS
late from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme he . Solvent vapors may be heavier than air. Under conditions of stagnant air, vapors may build up and travel along the ground to an ignition source which may result in a flash back to the source of the vapors.

========== SECTION V - REACTIVITY DATA ==========

STABILITY: STABLE

CONDITIONS TO AVOID
Exposure to temperatures above 200F.

INCOMPATIBILITY (MATERIALS TO AVOID)
Avoid contamination with acids, oxidizing materials, aldehydes and organic halides

HAZARDOUS DECOMPOSITION OR BYPRODUCTS
Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide, nitrogen oxide and ammonia.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

========== SECTION VI - HEALTH HAZARD DATA ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Vapors are irritating and may cause nausea, vomiting and sensitization of the respiratory tract.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Vapors and liquid are irritating and may cause chemical burns. A strong sensitizer which may cause skin rash.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Prolonged or repeated contact may result in the absorption of harmful amounts of material.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE
Moderately toxic. Ingestion could cause irritation and possible corrosive action in the mouth, stomache and digestive tract. Vomiting may cause aspiration of the solvents resulting in chemical pneumonia.

HEALTH HAZARDS (ACUTE AND CHRONIC)
Prolonged or repeated contact with product can result in dry defatted and cracked skin causing increased susceptability to infection. Over exposure to solvents has been associated with various neurological effects including permanent brain and nervous system damage.

CARCINOGENICITY: NTP? NO IARC MONOGRAPHS? NO OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
Asthma and any other respiratory disorders (brochitis, emphysema, hyperactivity), skin allergies and eczema.

EMERGENCY AND FIRST AID PROCEDURES
EYE CONTACT: Flush with clean, lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids. Obtain medical attention. SKIN CONTACT: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. Inhalation: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed.

========== SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

icuate all non-essential personnel. Remove all sources of ignition. Ventilate the area. Dike or impound spilled materi al and control further spillage if feasible. Cover spill with sawdust, vermiculite, Fuller's earth or other absorbant.

WASTE DISPOSAL METHOD

Waste material should be incinerated or disposed of in accordance with Federal, State and local environment control regu lations. Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. DO NOT HEAT OR CUT EMPTY CONTAINERS WITH ELECTRIC OR GAS TORCH.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep away from heat, sparks, and open flame. Ground containers during storage and transfer operations. Store in tightly closed containers to prevent moisture contamination. Ideal storage temperature range is 50-81F (10-27C). Avoid contact w ith skin and eyes.

OTHER PRECAUTIONS

Employee education and training in the safe use of this product should be provided in accordance with OSHA Hazard Commun ication Standards.

========== SECTION VIII - CONTROL MEASURES ==========

RESPIRATORY PROTECTION

Use a respirator that is recommended or approved for use in an organic solvent containing environment (air purifying or fresh air supplied). Observe OSHA regulations (29 CFR 1910.134) for respirator use. Where airborne concentration is unkn n, the use of a positive pressure supplied air respirator is mandatory.

VENTILATION

Exhaust ventilation should be of explosion proof design sufficient to maintain the airborne concetration of solvents an d amine below their respective TLV concentrations.

PROTECTIVE GLOVES

Chemical resistant (Neoprene) gloves

EYE PROTECTION

Safety glasses, splash goggles or face shield. Contact lenses should not be worn

OTHER PROTECTIVE CLOTHING OR EQUIPMENT

Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area pro tected only by the cream to a minimum.

WORK/HYGIENIC PRACTICES

Safety showers and eyewash stations should be availible. Educate and train employees in the safe use of the product.

========== SECTION IX - DISCLAIMER ==========

DISCLAIMER

The information contained herein is based on the data availible to us and is believed to be correct. However, Sikkens Ae rospace makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from t use thereof. Sikkens Aerospace assumes no responsibility for injury from the use of the product described herein.